Remarks

Claims 1, 3-5, 7, 9-16, 29, and 42-46 are currently pending in the application and stand rejected.

Claim Rejections - 35 USC § 103(a)

The Examiner rejected claims 1, 3-5, 7, 9-16, 29, and 42-26 under 35 USC § 103(a) citing Moerder et al., US Patent 6,256,483 (hereinafter referred to as *Moerder*) in view of Franchville et al., US Patent 6,278,485 (hereinafter referred to as *Franchville*).

Regarding claim 1,

The Examiner rejected claim 42 stating, in part, that *Moerder* teaches "a wide-range microwave communications unit" (*Office Action*, p. 2), however, the Applicants are unable to find the term "microwave" anywhere in *Moerder*. Since *Moerder* does not teach microwaves, *Moerder* cannot teach teaches "a wide-range microwave communications unit" as required by the claim.

The Examiner also rejected claim 1 stating, in part, that *Moerder* teaches "a precalibrated IF module having IF circuitry (see col. 6, lines 20-25) and an IF module memory operative for storing calibration values for the IF circuitry (see col. 12, lines 13-21); at least one precalibrated RF module having RF circuitry (see col. 6, lines 26-33) and an RF module memory operative for storing RF calibration values for the RF circuitry (see col. 12, lines 13-21)" (*Office Action*, p. 3).

The Applicants respectfully submit that *Moerder* does not teach precalibrated modules (i.e., modules that are precalibrated). Rather, as cited in col. 12, lines 13-21 by the Examiner, *Moerder* teaches:

> In another embodiment, the output of the amplifier 82 during the calibration process is dumped into a dummy load so that a majority of the energy output by the power amplifier 82 is not transmitted over the wireless link. In yet another embodiment, the remote unit transmits within the random access reverse link channels during the calibration process. In another embodiment, the remote unit continues to transmit user data during the calibration process rather than a dummy sequence.

The Applicants respectfully point out that the cited portion of *Moerder* merely teaches actions taken during calibration process and not precalibrated modules.

The Applicants also respectfully point out that the cited portions of *Moerder* do not teach memory within the IF circuitry or the RF circuitry. Similarly, the cited portions of *Moerder* do not teach an IF module memory or an RF module memory. Further, the cited portions of *Moerder* make no reference to calibration values, much less calibration values for the IF circuitry and the calibration values for the RF circuitry, which are stored in the IF module memory and the RF module memory, respectively.

The Applicants respectfully submit that the cited portions of *Moerder* does not teach a calibration process involving the calibration of the IF circuitry or the RF circuitry identified in *Moerder*. The calibration taught by *Moerder* is a calibration of an outdoor unit (ODU). The Examiner himself cites that the IF circuitry and the RF circuitry are within a completely different unit (i.e., an indoor unit (IDU)) (see col. 9, lines 24-28 of *Moerder*). As such, the Examiner has not shown that *Moerder* teaches calibration of the IF circuitry and the RF circuitry, much less "a precalibrated IF module having IF circuitry and an IF module memory operative for storing calibration values for the IF circuitry; at least one precalibrated RF module having RF circuitry and an RF module memory operative for storing RF calibration values for the RF circuitry" as required by the claim.

The Examiner rejected claim 1 stating, in part, that *Franchville* teaches "an IF detector and an RF detector (see col. 12, lines 45-48)" (*Office Action*, p. 3). Col. 12, lines 45-48 *Franchville* teaches:

> The control loop amplifier 326 receives the feedback signal from the feedback detector 322, and furthermore receives a reference level signal RF_ON from the controller 304.

The Applicants respectfully point out that the cited section of *Franchville* does not teach an IF detector (e.g., a detector that detects intermediate frequencies) or an RF detector (e.g., a detector that detects radio frequencies) as required by the claim. *Franchville* teaches a feedback detector 322. As depicted in FIG. 3 of *Franchville*, the feedback detector 322 detects the feedback between the Electrostatic discharge circuit (ESD) and the RF test circuit 310.

Detecting the feedback is not detecting an intermediate frequency (i.e., the feedback detector 322 is not an IF detector). Similarly, detecting the feedback between the ESD and the RF test circuit 310 is not detecting a radio frequency. The Applicants respectfully submit that *Franchville* does not teach either an IF detector or an RF detector as required by the claim.

The Examiner also stated that *Franchville* teaches "with said RF module memory storing transmit calibration values for the attenuator and the IF and RF detectors (see col. 12, line 67 to col. 13, line 2)" (*Office Action*, p. 3). Col. 12, line 67 to col. 13, line 2 teaches:

> It is noted that the feedback control loop may further contain temperature calibration control circuitry, the implementation of which would be known to those of ordinary skill in the art.

The Applicants respectfully point out that the cited section of *Franchville* does not teach an "RF module memory storing transmit calibration values for the attenuator and the IF and RF detectors" as required by the claim.

The Applicants respectfully submit that *Franchville* does not teach or discuss calibration values for an attenuator, much less the IF and RF detectors. Rather, *Franchville* teaches that the feedback control loop may contain temperature calibration control circuitry, apparently for the temperature calibration of circuitry in the feedback control loop (i.e., control circuitry). *Franchville* does not teach or suggest storing calibration values, much less storing calibration values for an attenuator. Moreover, since the feedback control loop does not include an IF detector and an RF detector (as previously discussed), the Applicants respectfully submit that *Franchville* does not teach calibration values for the IF and RF detectors as required by the claim.

The Applicants also respectfully submit that the Examiner has not provided a motivation to combine *Moerder* with *Franchville*. The Examiner has stated that "Therefore, it would have been obvious to … to provide the teachings of *Franchville* to said device of *Moerder* in order to increase the accuracy of calibration while maintaining the complexity of the circuit" (*Office Action*, p. 3). The Examiner has not shown how a feedback detector in a feedback control loop as taught in *Franchville* increases the accuracy of the calibration of the outdoor unit as taught in *Moerder*. Further, the maintenance of complexity in a circuit is not a motivation to combine

Moerder and *Franchville*. Rather, complexity is a reason to not combine *Moerder* and *Franchville*. Circuit complexity increases costs and time of manufacture, costs and time of testing, and increases the chances of error during performance.

The Applicants respectfully submit that "[r]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." (*In re Kahn*, 441 F. 3d 977, 988 (CA Fed. 2006) cited with approval in KSR). Further, MPEP 2143.01 states "A statement that modifications of the prior art to meet the claimed invention would have been 'well within the ordinary skill of the art at the time the claimed invention was made' because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references."

Since the Examiner has not provided "articulated reasons with some rational underpinning to support the legal conclusion of obviousness" to support the combination of *Moerder* with *Franchville*, the Applicants respectfully submit that a *prima facie* case of obviousness has not been established.

For at least these reasons, the Applicants respectfully request that the rejections to claim 1, as well as the rejections to all claims that depend upon claim 1, be withdrawn and the claims allowed.

Regarding claims 3-5,

For at least the reasons discussed with respect to claim 1, the Applicants respectfully request that the rejections to claims 3-5 be withdrawn and the claims allowed.

Regarding claim 7,

The Examiner rejected claim 7 stating, in part, that *Moerder* teaches "a wide-range microwave communications unit" (*Office Action*, p. 4), however, the Applicants are unable to find the term "microwave" anywhere in *Moerder*. Since *Moerder* does not teach microwaves,

Moerder cannot teach teaches "a wide-range microwave communications unit" as required by the claim.

The Examiner admits that *Moerder* does not teach an RF transmit module memory operative for storing operative for storing calibration values for the RF transmit circuitry, the RF transmit circuitry including a transmit attenuator, an IF detector and an RF detector." However, the Examiner states that *Franchville* teaches an RF transmit module memory operative for storing calibration values for the RF transmit circuitry (see col. 12, line 67 to col. 13, line 2)" (*Office Action*, p. 4). Col. 12, line 67 to col. 13, line 2 teaches:

> It is noted that the feedback control loop may further contain temperature calibration control circuitry, the implementation of which would be known to those of ordinary skill in the art.

The Applicants respectfully point out that the cited section of *Franchville* does not teach an "RF transmit module memory operative for storing operative for storing calibration values for the RF transmit circuitry, the RF transmit circuitry including a transmit attenuator, an IF detector and an RF detector" as required by the claim.

The Applicants respectfully submit that the cited portion of *Franchville* does not teach or discuss calibration values for an attenuator, much less the IF and RF detectors. In this case, *Franchville* teaches that the feedback control loop may contain temperature calibration control circuitry, apparently for the temperature calibration of circuitry in the feedback control loop (i.e., control circuitry). *Franchville* does not teach or suggest storing calibration values, much less storing calibration values for an attenuator. Moreover, since the feedback control loop does not include an IF detector and an RF detector (as previously discussed), The Applicants respectfully submit that *Franchville* does not teach calibration values for the IF and RF detectors as required by the claim.

The Examiner rejected claim 7 stating, in part, that *Franchville* teaches "an IF detector and an RF detector (see col. 12, lines 45-48)" (*Office Action*, p. 5). Col. 12, lines 45-48 *Franchville* teaches:

> The control loop amplifier 326 receives the feedback signal from the feedback detector 322, and furthermore receives a reference level signal RF_ON from the controller 304.

The Applicants respectfully point out that the cited section of *Franchville* does not teach an IF detector (e.g., a detector that detects intermediate frequencies) or an RF detector (e.g., a detector that detects radio frequencies) much less both an IF detector and an RF detector as required by the claim.

Franchville teaches a feedback detector 322. As depicted in FIG. 3 of *Franchville*, the feedback detector 322 detects the feedback between the Electrostatic discharge circuit (ESD) and the RF test circuit 310. Detecting the feedback is not detecting an intermediate frequency (i.e., the feedback detector 322 is not an IF detector). Similarly, detecting the feedback between the ESD and the RF test circuit 310 is not detecting a radio frequency. The Applicants respectfully submit that *Franchville* does not teach either an IF detector or an RF detector as required by the claim.

The Applicants also respectfully submit that the Examiner has not provided a motivation to combine *Moerder* with *Franchville*. The Examiner has stated that "Therefore, it would have been obvious to … provide the teachings of *Franchville* to said device of *Moerder* in order to increase the accuracy of calibration while maintaining the complexity of the circuit" (*Office Action*, p. 3). The Examiner has not shown how a feedback detector in a feedback control loop as taught in *Franchville* increases the accuracy of the calibration of the outdoor unit as taught in *Moerder*. Further, the maintenance of complexity in a circuit is not a motivation to combine *Moerder* and *Franchville*. Rather, complexity is a reason to not combine *Moerder* and *Franchville*. Circuit complexity increases costs and time of manufacture, costs and time of testing, and increases the chances of error during performance.

The Applicants respectfully submit that "[r]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." (*In re Kahn*, 441 F. 3d 977, 988 (CA Fed. 2006) cited with approval in KSR). Further, MPEP 2143.01 states "A statement that modifications of the prior art to meet the claimed invention would have been 'well within the ordinary skill of the art at the time the claimed invention was made' because the

references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references."

Since the Examiner has not provided "articulated reasons with some rational underpinning to support the legal conclusion of obviousness" to support the combination of *Moerder* with *Franchville*, the Applicants respectfully submit that a *prima facie* case of obviousness has not been established.

For at least these reasons as well as the reasons discussed in claim 1, the Applicants respectfully request that the rejections to claim 7, as well as the rejections to all claims that depend upon claim 7, be withdrawn and the claims allowed.

Regarding claims 9-16 and 29,

For at least the reasons discussed with respect to claims 1 and 7, the Applicants respectfully request that the rejections to claims 9-16 and 29 be withdrawn and the claims allowed.

Regarding claim 42,

The Examiner rejected claim 42 stating, in part, that *Moerder* teaches "with the processor being operably configured to control the IF transmit circuitry and receive instructions for controlling the IF receive circuitry based on IF transmit calibration values and IF receive calibration values stored in the IF module memory (see col. 12, line 13-21)" (*Office Action*, p. 8). The Applicants respectfully submit that the cited portion of *Moerder* does not teach a processor much less a processor configured to "receive instructions for controlling the IF receive circuitry based on IF transmit calibration values and IF receive calibration values stored in the IF module memory" as required by the claim.

The Examiner also rejected claim 42 stating, in part, that *Moerder* teaches "a wide-range microwave communications unit" (*Office Action*, p. 7), however, the Applicants are unable to find the term "microwave" anywhere in *Moerder*. Since *Moerder* does not teach microwaves,

Moerder cannot teach teaches "a wide-range microwave communications unit" as required by the claim.

Further, the Examiner rejected claim 42 stating, in part, that *Moerder* teaches "a precalibrated RF module having RF transmit module with RF circuitry (see col. 6, lines 26-33) and wherein the module memory in the precalibrated RF module includes and RF receive module memory operative for storing calibration values for the RF transmit circuitry (see col. 12, lines 13-21); and a precalibrated IF module comprising IF transmit circuitry (see col. 6, lines 20-25)" (*Office Action*, pp. 7-8).

The Applicants respectfully submit that *Moerder* does not teach precalibrated modules (i.e., modules that are precalibrated). Rather, as cited in col. 12, lines 13-21, *Moerder* teaches:

> In another embodiment, the output of the amplifier 82 during the calibration process is dumped into a dummy load so that a majority of the energy output by the power amplifier 82 is not transmitted over the wireless link. In yet another embodiment, the remote unit transmits within the random access reverse link channels during the calibration process. In another embodiment, the remote unit continues to transmit user data during the calibration process rather than a dummy sequence.

The Applicants respectfully point out that the cited portion of *Moerder* merely teaches actions taken during calibration process and not precalibrated modules.

The Applicants also respectfully point out that the cited portions of *Moerder* do not teach memory within the IF circuitry or the RF circuitry. Similarly, the cited portions of *Moerder* do not teach an IF module memory or an RF transmit module memory. Further, the cited portions of *Moerder* make no reference to calibration values, much less calibration values for the IF circuitry and the calibration values for the RF circuitry which are stored in the IF module memory and the RF module memory, respectively.

The Applicants respectfully submit that the cited portions of *Moerder* does not teach "the processor being operably configured to control the IF transmit circuitry and receive instructions for controlling the IF receive circuitry based on IF transmit calibration values." The calibration taught by *Moerder* is a calibration of an outdoor unit (ODU). The Examiner himself cites that

the IF circuitry is within a completely different unit (i.e., an indoor unit (IDU)) (see col. 9, lines 24-28 of *Moerder*). As such, the Examiner has not shown that *Moerder* teaches calibration of the IF circuitry, much less "the processor being operably configured to control the IF transmit circuitry and receive instructions for controlling the IF receive circuitry based on IF transmit calibration values" as required by the claim.

The Examiner admits that "*Moerder* does not teach RF circuitry including RF transmit circuitry and wherein the RF module memory includes an RF transmit module memory, the RF transmit circuitry including an attenuator, an IF detector and an RF detector, and with said RF module memory storing transmit calibration values for the RF transmit circuitry" (*Office Action*, p. 8). However, the Examiner rejected claim 1 stating, in part, that *Franchville* teaches an "IF detector and an RF detector (see col. 12, lines 45-48)" (*Office Action*, p. 8). Col. 12, lines 45-48 *Franchville* teaches:

> The control loop amplifier 326 receives the feedback signal from the feedback detector 322, and furthermore receives a reference level signal RF_ON from the controller 304.

The Applicants respectfully point out that the cited section of *Franchville* does not teach an IF detector (e.g., a detector that detects intermediate frequencies) or an RF detector (e.g., a detector that detects radio frequencies) much less both an IF detector and an RF detector as required by the claim.

Franchville teaches a feedback detector 322. As depicted in FIG. 3 of *Franchville*, the feedback detector 322 detects the feedback between the Electrostatic discharge circuit (ESD) and the RF test circuit 310. Detecting the feedback is not detecting an intermediate frequency (i.e., the feedback detector 322 is not an IF detector). Similarly, detecting the feedback between the ESD and the RF test circuit 310 is not detecting a radio frequency. The Applicants respectfully submit that *Franchville* does not teach either an IF detector or an RF detector as required by the claim.

The Applicants also respectfully submit that the Examiner has not provided a motivation to combine *Moerder* with *Franchville*. The Examiner has stated that "Therefore, it would have been obvious to … to provide the teachings of *Franchville* to said device of *Moerder* in order to

increase the accuracy of calibration while maintaining the complexity of the circuit" (*Office Action*, p. 3). The Examiner has not shown how a feedback detector in a feedback control loop as taught in *Franchville* increases the accuracy of the calibration of the outdoor unit as taught in *Moerder*. Further, the maintenance of complexity in a circuit is not a motivation to combine *Moerder* and *Franchville*. Rather, complexity is a reason to not combine *Moerder* and *Franchville*. Circuit complexity increases costs and time of manufacture, costs and time of testing, and increases the chances of error.

The Applicants respectfully submit that "[r]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." (*In re Kahn*, 441 F. 3d 977, 988 (CA Fed. 2006) cited with approval in KSR). Further, MPEP 2143.01 states "A statement that modifications of the prior art to meet the claimed invention would have been 'well within the ordinary skill of the art at the time the claimed invention was made' because the references relied upon teach that all aspects of the claimed invention were individually known in the art is not sufficient to establish a *prima facie* case of obviousness without some objective reason to combine the teachings of the references."

Since the Examiner has not provided "articulated reasons with some rational underpinning to support the legal conclusion of obviousness" to support the combination of *Moerder* with *Franchville*, the Applicants respectfully submit that a *prima facie* case of obviousness has not been established.

For at least these reasons as well as the reasons discussed in claims 1 and 7, the Applicants respectfully request that the rejections to claim 42, as well as the rejections to all claims that depend upon claim 42, be withdrawn and the claims allowed.

Regarding claims 43-46,

For at least the reasons discussed with respect to claims 1, 7, and 42, the Applicants respectfully request that the rejections to claims 43-46 be withdrawn and the claims allowed.

Applicants believe that all pending claims are allowable and respectfully request that the Examiner issue a Notice of Allowance. Should the Examiner have any questions, Applicants' undersigned representative may be reached at the number provided.

Respectfully submitted,
Ying Shen, et al.

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/Daniel C. Kloke/
Daniel C. Kloke
Reg. No. 58,417
Sheppard Mullin Richter & Hampton LLP
990 Marsh Rd
Menlo Park, CA 94025

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